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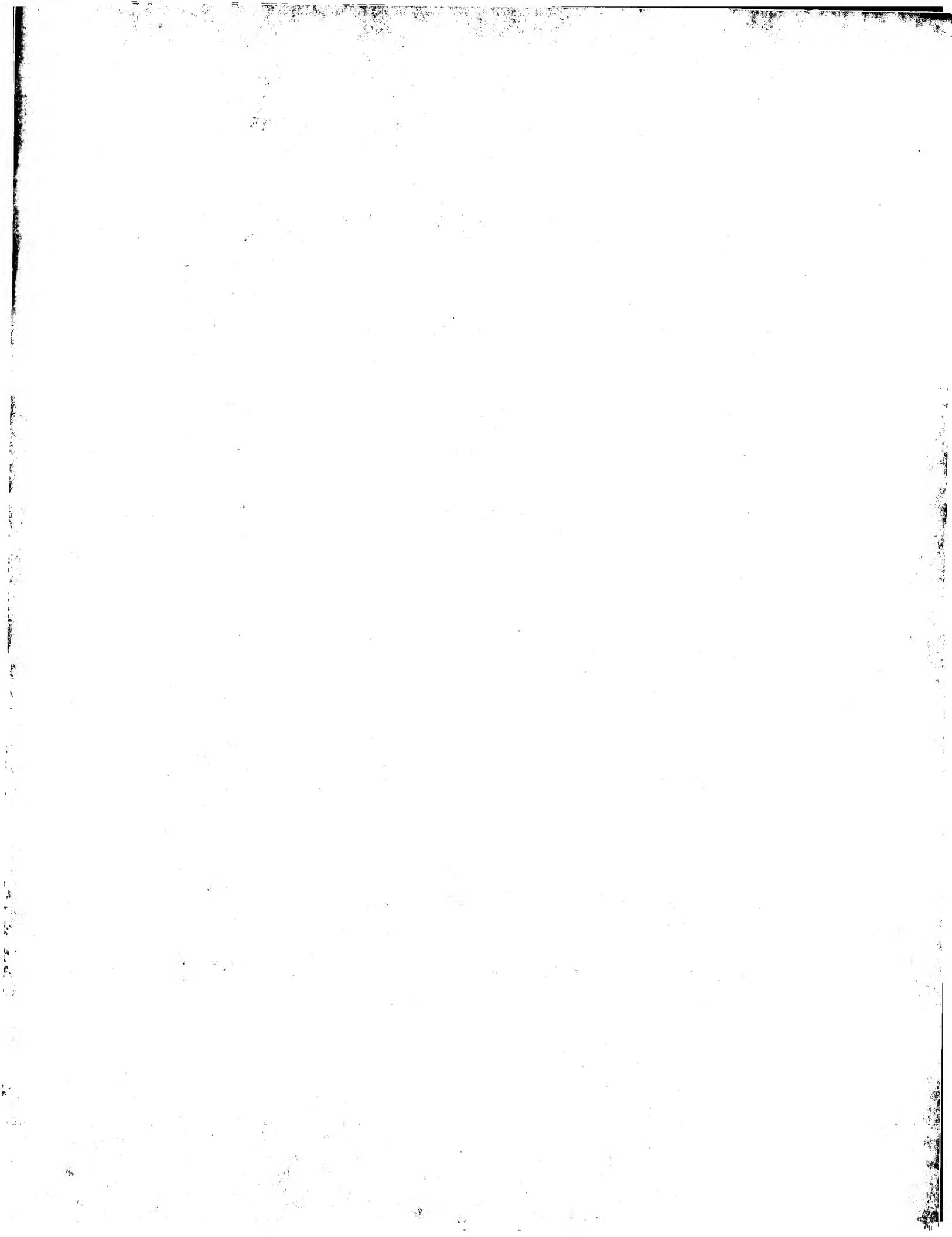
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PATENT SPECIFICATION

978,305



978,305

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COMPLETE SPECIFICATION

NO DRAWINGS

Improvements in the Treatment of Fabrics made from Cellulosic Textile Materials or from Mixtures thereof with Synthetic or Animal Fibres

I, MARIAN ADAMSKI, Stateless, of 60 Halkincroft, Langley, Buckinghamshire, formerly of 33 Crosslees Park, Thornliebank, Glasgow, do hereby declare the invention, for which I pray that a patent may be granted to me, and the method by which it is to be performed, to be particularly described in and by the following statement:—

This invention relates to the treatment of fabrics made from cellulosic textile materials or from mixtures thereof with synthetic or animal fibres for the purpose of enhancing their crease and wear resistance.

It is known to impregnate, for example viscose rayon fabrics with urea formaldehyde resin precondensates and subsequently to dry and bake the fabric under acid conditions. In this manner a fabric having good crease resistance properties is produced but it is a disadvantage of fabric thus produced that the resistance to abrasion of the fabric is reduced by the treatment.

It is an object of the present invention substantially to overcome this disadvantage.

In accordance with the present invention the fabric is treated with a mixture of polyvinyl alcohol, sebacic acid, a drying oil and an aldehyde as a cross linking agent under acidic conditions, and the fabric is subsequently dried and baked.

As starting materials polyvinyl acetate and castor oil are used in order to produce polyvinyl alcohol and sebacic acid simultaneously and, in turn, to produce a polyester during baking under acid conditions, the unreacted portion of the castor oil serving as the drying oil.

A suitable mixture to produce the desired reaction consists of polyvinyl acetate 100 c.c.: castor oil 75 c.c. and a 10% solution of caustic soda pellets in ethyl alcohol 100 c.c. The mixture is boiled under reflux for 30 minutes before being cooled. 50 c.c. of formaldehyde

serving as the cross linking agent diluted with 25 c.c. of a 10% solution of caustic soda 45 in ethyl alcohol are then added to the above mixture together with 10 c.c. of concentrated phosphoric acid, the resulting pH value being approximately 4.5.

In carrying out the treatment the fabric is 50 padded with the mixture thus produced and is then dried and baked and finally simultaneously scoured and oxidized under alkaline conditions. For example the fabric may be baked for 3 minutes at 150°C. and the 55 fabric may be scoured for 10 minutes at 80°C. in an aqueous solution of soda ash (3 grammes per litre), sodium perborate (3 grammes per litre) and a detergent such as that marketed under the Trade Mark "Teepol" (3 grammes per litre).

After treatment in the solution a viscose rayon fabric resisted to 7580 revolutions before abrading. Crease resisted fabric not subjected to the treatment according to the invention will only resist to approximately 800 revolutions before abrading. The shrinkage after boiling for 30 minutes in equal proportions of the detergent marketed under the Trade Mark "Teepol" and soda ash was 65 0.5% for warp and 0.20% for weft showing that the treated fabric is highly resistant to abrasion and to shrinkage.

The dried fabric is found to be crease, shrink and abrasion resistant and possesses 75 good tensile strength. In addition, the fabric withstands the action of certain light oxidising agents, acids and alkalis.

The handle of the fabric can be varied from soft to stiff depending on the type of 80 polyvinyl alcohol used.

WHAT I CLAIM IS:—

1. A method of treating fabric made from cellulosic textile materials or from mixtures thereof with synthetic or animal fibres comprising the steps of treating the fabric with a

[Price 4s. 6d.]

1 mixture of polyvinyl alcohol, sebacic acid, a
drying oil and an aldehyde as a cross linking
agent under acidic conditions, and of subse-
quently drying and baking the fabric and
5 finally simultaneously scouring and oxidizing
under alkaline conditions.

2. A method as claimed in claim 1 in
which polyvinyl acetate and castor oil are
used in order to produce polyvinyl alcohol
10 and sebacic acid simultaneously and, in turn,
to produce a polyester by baking under acid
conditions, the unreacted portion of the castor
oil serving as the drying oil.

3. A method as claimed in claims 1 or 2
15 in which the mixture for treating the fabric
consists of polyvinyl acetate 100 cc, castor
oil 75 cc and a 10% solution of caustic soda
pellets in 100 cc ethyl alcohol, said mixture
being boiled under reflux for 30 minutes be-
20 fore being cooled and 50 c.c. of formalde-

hyde serving as a cross linking agent diluted
with 25 c.c. of a 10% solution of caustic soda
in ethyl alcohol being subsequently added to
said mixture together with 10 c.c. of concen-
trated phosphoric acid the resulting pH value 25
being approximately 4.5.

4. A method as claimed in claim 3 in
which the fabric after being dried and baked
is scoured in an aqueous solution of soda ash,
sodium borate and a detergent. 30

5. Fabric made from cellulosic textile
materials or from mixtures thereof with syn-
thetic or animal fibres treated in accordance
with the method claimed in any of the pre-
ceding claims. 35

CRUICKSHANK & FAIRWEATHER,
Chartered Patent Agents,
29 St. Vincent Place,
Glasgow, C.I.
Agents for the Applicant.

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